

CLAIMS

The following is a listing of all claims in the application.

1. (Previously Amended) A workflow management system for automating a business process, comprising:

- a host computer that controls the system;
- an administrator that prepares for automating the business process;
- a process designer that creates and models flows and properties of the business process;
- a database that compiles information on the administrative steps and the properties of the business process;
- a process engine that executes and handles the business process based on the information on the administrative steps and the flows and the properties of the business process;
- a web client; and
- an application program that can be used for at least one of creating and executing the business process.

2. (Previously Amended) The workflow management system of claim 1, wherein the administrator further comprises:

- an organization manager that can create, delete and maintain a department;
- a role/group manager that can create, delete and maintain a role and a user group;
- an authority manager that can create, delete and maintain

authorities to access the business process and the application program and
can allocate the authorities to the role, the group and a member of at least
one of the department and the user group; and

a folder manager that can create, delete and maintain a folder.

3. (Original) The workflow management system of claim 2,
further comprising an object manager, wherein the object manager interfaces
the administrator with the database.

4. (Original) The workflow management system of claim 3,
wherein the database further comprises:

an organization database;

authority database; and

a folder database.

5. (Original) The workflow management system of claim 1,
wherein the process designer comprises:

a graphic designer that can create and design an activity and a
business process using a graphic interface; and

a property designer that can define an activity to be executed in the
business process.

6. (Original) The workflow management system of claim 5,
wherein the processor designer further comprises an object manager that
interfaces the processor designer with the database.

7. (Original) The workflow management system of claim 6, wherein the database comprises:

a process definition folder that contains information related to the business process modeling;

a data folder that contains data generated by the business process execution; and

an organization folder.

8. (Original) The workflow management system of claim 1, wherein the web client further comprises:

a worklist handler;

a workitem handler; and

a process monitor.

9. (Original) The workflow management system of claim 8, wherein the worklist handler maintains a work list for a user.

10. (Previously Amended) The workflow management system of claim 9, wherein the workitem handler supports execution of the business process.

11. (Previously Amended) The workflow management system of claim 10; wherein the process monitor checks status of the business process.

12. (Previously Amended) The workflow management system of claim 11, wherein the process monitor further checks a history of the business process and current progress of the business process.

13. (Previously Amended) The workflow management system of claim 12, wherein the process monitor further monitors resource utilization.

14. (Previously Amended) The workflow management system of claim 2, wherein the organization manager further creates, deletes and maintains relationships between the departments, ranks of the members in the department and/or user group and information regarding the members in the department and/or user group.

15. (Previously Amended) The workflow management system of claim 14, wherein the organization manager further registers a signature of each member of the department and/or user group.

16. (Previously Amended) The workflow management system of claim 2, wherein the role/group manager can allocate the member to the role and the user group.

17. (Previously Amended) The workflow management system of claim 2, wherein the authority manager can allocate the authorities to the role, the group and the member of the department and/or user group.

18. (Previously Numbered As Claim 19) The workflow management system of claim 5, wherein the property designer can allocate the activity to a participant.

19. (Previously Numbered As Claim 20) The workflow management system of claim 5, wherein the property designer can set up a business rule.

20. (Previously Numbered As Claim 21 and Previously Amended) The workflow management system of claim 19, wherein the business rule includes terms, conditions and a transition path after completing the activity.

21. (Previously Numbered As Claim 22) The workflow management system of claim 5, wherein the process designer further comprises a check-out table.

22. (Previously Numbered As Claim 23 and Previously Amended) The workflow management system of claim 21, wherein the check-out table contains information on a process model currently checked-out by a user.

23. (Previously Numbered As Claim 24 and Previously Amended) The workflow management system of claim 23, wherein the system keeps a currently checked-out process from being checked-out again by referring to the check-out table.

24. (Previously Numbered as Claim 25 and Previously Amended) The

workflow management system of claim 1, wherein the process engine comprises:

an interface agent that can interchange with other process engines information on a status of the business process;

a request manager that receives requests from a user, directs the process engine to handle the requests, and returns results to the user;

a dispatcher that retrieves and executes the requests and stores results in the database;

a scheduler;

a security manager that controls a certification process with an outside certification server; and

a database broker that interfaces with the process engine and the database.

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25. (Previously Numbered As Claim 26 and Previously Amended) The workflow management system of claim 24, wherein the process engine allocates at least one activity to at least one participant and the activities comprise states of: initial; waiting; dead; running; suspended; complete; terminated; error; and overdue.

26. (Previously Numbered As Claim 27 and Previously Amended) The workflow management system of claim 24, wherein the scheduler manages a deadline of the activity and a wait activity.

27. (Previously Numbered As Claim 28 and Previously Amended) The workflow management system of claim 24, wherein the security manager further encodes and decodes information.

28. (Previously Numbered As Claim 29 and Previously Amended) The workflow management system of claim 25, wherein the activities transit among the states according to a business rule.

29. (Previously Numbered As Claim 30 and Previously Amended) The workflow management system of claim 26, wherein the process engine controls the workflow using a transition count in order to keep a consistency of the business process transitions according to a business rule.

C1 30. (Previously Numbered As Claim 31 and Previously Amended) The workflow management system of claim 29, wherein the process engine sets to zero the transition counts of all the transitions that can be processed in a forward direction from the at least one activity, when the activity is started.

31. (Previously Numbered As Claim 32 and Previously Amended) The workflow management system of claim 30, wherein the process engine further sets to one the transition counts of the transitions stemming from the activity, when the activity is completed.

32. (Previously Numbered As Claim 33 and Previously Amended) A method for automating a business process, comprising steps of:

modeling the business process, the step of modeling including generating
an organization chart;

designing the business process;

compiling the business process in a database;

executing the business process; and

monitoring the business process.

33. (Previously Numbered As Claim 34 and Previously Amended) The
method of claim 32, wherein the step of modeling the business process further
comprises:

mapping at least one of departments, members, member titles and
member roles to generate the organization chart;

creating a role; and

allocating an authority to the role.

34. (Previously Numbered As Claim 35 and Previously Amended) The
method of claim 32, wherein the step of modeling the business process further
comprises:

mapping at least one of departments, members, member titles and
member roles to generate the organization chart;

creating a group of human resources; and

allocating an authority to the group of human resources.

35. (Previously Numbered As Claim 36 and Previously Amended) The
method of claim 32, wherein the step of designing a process further comprises:

identifying an activity to be executed; and
allocating a property to the activity.

36. (Previously Numbered As Claim 37 and Previously Amended) The
method of claim 35, wherein the activity comprises:

a start activity that starts a process;
a normal activity that involves an intervention by a participant;
a wait activity;
a mail activity;
an SQL activity that accesses an application database;
a sub-process activity that comprises a plurality of separate activities;
an agent activity that automatically activates a program;
a connector activity; and
an end activity that represents an end of the process.

37. (Previously Numbered As Claim 38 and Previously Amended) The
method of claim 35, wherein the property comprises:

a participant that describes an individual that executes the activity;
an application;
a post-condition that determines when the activity is completed;
a schedule that describes planning of the activity;
a deadline;
a sub-process that describes a location and an option of the sub-process
activity;
a parameter that defines a value necessary for executing a program in

the agent activity;

a mail-to that determines the recipient of e-mail in the mail activity;

a mail content that represent the contents of e-mail in the mail activity;

a general information that shows the names and the descriptions of the activity;

a transition condition that represents conditions for an input transition and an output transition; and

an icon.

38. (Previously Numbered As Claim 39 and Previously Amended) The method of claim 35, wherein the participant can comprise one of or any combination of a user, a department and the role.

C 39. (Previously Numbered As Claim 40 and Previously Amended) The method of claim 38, wherein the participant can be a manager of the participant.

40. (Previously Numbered As Claim 41 and Previously Amended) The method of claim 38, wherein the participant can be a peer of the participant.

41. (Previously Numbered As Claim 42 and Previously Amended) The method of claim 38, wherein the participant can be a department of the participant.

42. (Previously Numbered As Claim 43 and Previously Amended) The

method of claim 38, wherein activity is allocated based on a workload of the participant.

d 43. (Currently Amended) The method of claim 32, wherein generating an organization chart comprises mapping departments, member names, member titles, and member roles.
